death, the breast supply had been completely stopped and the milk mixture had been given exclusively. The baby died in coma, and the cause of death was not known until after the autopsy. Urine removed from the bladder at this examination showed the presence of a large proportion of albumin, with hyaline, epithelial, and granular casts, leucocytes, and red corpuscles. Sections of the kidney showed the lesions of acute parenchymatous degeneration.

The use of saccharin had been begun at the age of two months, being then added to its drinking-water, and the drug was administered uninterruptedly until death at fourteen months. During the last two months this substance was added to the artificial food as well as the drinking-water. At first the amount averaged one-sixth of a grain per diem, but it was gradually increased until finally at least four or five-sixths of a grain were given daily.

It is known that saccharin is absorbed as such, and is eliminated unchanged by the kidneys, but up to the present time the few observations of the action of this drug upon man have been confined to a few days of administration, and have shown no distinct effect upon the kidneys. The author believes, in the absence of any other discoverable cause, that the prolonged excretion of saccharin by the kidney was directly responsible for the renal degeneration in this case.

Rubeoliform and Other Eruptions, with Special Reference to Koplik's Phenomenon.—J. SOBEL (*Medical Record*, June 3, 1899, p. 781) gives noteworthy conclusions in regard to the value of Koplik's sign in diagnosis.

It is not uncommon for the initial symptom of influenza to suggest measles. In the presence of such symptoms the absence of Koplik's spots excludes measles; in the absence of any symptoms the presence of this phenomenon proves the case to be a beginning of measles. What is true of influenza holds good for coryza, tonsillitis, bronchitis, febricula, etc.

German measles cannot be excluded more satisfactoily than by the absence of Koplik's spots. The moderate elevation or absence of elevation of temperature, the lack of proportion between the cutaneous outbreak and the general symptoms, the non-existence or mildness of coryza, the lighter color, smaller size, and more concentric character of the eruption, the soft-palate eruption of Forchheimer, and the enlargement of the glands behind the sternomastoid are all of inferior worth, he thinks, as differential factors when compared with these spots He has seen a number of cases of German measles in which rubeola was excluded by the absence of this sign, and the diagnosis substantiated by the failure of any subsequent symptoms of measles. The fact of second attacks of true measles, which has long been accepted by clinical observers, has received peculiar confirmation from the recent observations of Knöspel, of Prague, who has diagnosticated a second attack of measles in the same patient by the presence of Koplik's spots. It is thus seen that in the subsequent as well as in the initial attack of measles Koplik's spots are present. The presence of the spots has also made possible the diagnosis of a measles eruption from the morbilliform eruption which occasionally follows from four to six days after the administration of diphtheria antitoxin. Le Fetra (*Medical Record*, October 8, 1898) has reported a case of measles complicating diphtheria for which antitoxin was adminstered, and the presence of Koplik's spots rendered the diagnosis of measles positive and excluded antitoxin rash.

Cases of erythema multiforme (papulatum, annulare, and gyratum), which frequently begins upon the face, and is accompanied by fever, headache, muscular and joint pains, and malaise, can be definitively distinguished from measles, according to Sobel, by the absence of Koplik's sign. Urticarial eruptions, especially when of the erythema-multiforme type, if considered in conjunction with their sudden appearance, the greater elevation of the lesions, their ephemeral character, the presence of itching, the lack of general symptoms, and, above all, the absence of Koplik's spots are readily distinguished.

Generalized vaccinia, of the urticarial and erythema-multiforme character, and violent cases of miliaria can be readily differentiated from measles by the absence of this sign.

Macular syphilide may at times be confounded with measles. The author has reported such a case in a boy, aged fifteen years, in whom all thought of syphilis was dispelled by the presence of Koplik's spots.

The value of the sign has also been tested in cases of drug eruptions caused by copaiba, antipyrin, quinine, bromides, and iodides.

Very puzzling conditions are sometimes presented when measles impresses or engrafts itself upon pre-existing skin lesions. The author reports a case of papular eczema in which a marked inflammatory change had suddenly occurred in the eruptive lesions. The rectal temperature was found to be 105°, but the catarrhal symptoms were slight, and the diagnosis uncertain but for the discovery of Koplik's spots.

Knöpsel has recorded instances of double infection with measles and scarlatina in which Koplik's sign was discovered five days before the eruption of measles made its appearance. The isolation of these cases, it is said, prevented an epidemic of measles in the scarlet-fever pavilion.

The sign would also be of great value in differentiating the rare condition termed erythema enematogenes from measles, which it is said it occasionally resembles.

SURGERY.

UNDER THE CHARGE OF

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The Reconstruction of a Perfectly Functionating Anal Sphincter from the Levator Ani and Glutei Muscles.—LENNANDER (*Cent. f. Chir.*, June 24, 1899) has devised an original and successful operation for the restoration of the anal sphincter in a case in which it had been destroyed by a phlegmonous ulceration which originated in the ischio-rectal spaces and left the patient without the power to retain either flatus or feces, even when astringents and opiates were employed. The opening into the rectum readily admitted three fingers, and electrical stimulation failed to reveal any contractility of the anal sphincter. Subsequent examination, after a successful operation had been performed, showed a local anæsthesia in the area about the anus and in the mucous lining of the gut, which made it highly probable that the nerves had been destroyed as well as the muscle.

Finding no analogous or similar cases reported in literature, he determined to construct a new sphincter, employing for this purpose the levator ani muscles, which have been shown to have the power of contraction in a manner similar to the anal sphincter. After careful dissections of the male perineum and a study of the possible operations he performed the following, with results that were all that could be desired, as the patient secured perfect control over both flatus and feces, even when the latter were liquid:

An incision followed the line of the sacrum and coccyx to the tip of the latter bone, and then took a horseshoe-form about the rectum. The posterior portion of the levator ani and the anterior portion of the coccygeus were laid bare by dissecting back the glutei from their median origin. The levator ani muscles were freed from the coccyx and coccygeal muscles, although the separation was not made completely to the margin of the pelvis, as it would have interfered with the innervation of the muscles by dividing the nerves which are found there springing from the sacral plexus. These portions of the levator ani were carried on either side of the rectum, and fixed to the anus in such a manner that their contraction produced a constriction of the rectum. The median portion of both glutei muscles were separated from the tubero-sacral ligament, the sacral bone, and the coccyx, and used to fill the defect in the pelvic floor caused by the displacement of the levator ani muscles. They were united in the median line with each other, with the levator ani muscles, and with the skin of the anus. The after-treatment consisted in electrical stimulation and the use of small enemata to accustom the rectum to retain its contents.

The Prevention of Thrombosis in the Veins of the Lower Extremities after Operations in which Rest in Bed for a Long Period is Necessary.—LENNANDER (*Cent. f. Chir.*, 1899, No. 19) cites a number of cases in which thrombosis of the veins of the lower extremities has occurred while the patient was confined in bed during a convalescence from a serious operation or a protracted illness. In some of the cases death resulted from the passage of an embolus through the heart, or serious complications were the result of its entrance into the lungs. He has studied carefully the conditions under which the thrombosis has taken place, and has come to the conclusion that it is not the result of the diseased condition *per se*, but of the lowered blood-pressure and anæmia that result, and the retardation that takes place in the venous circulation on account of the position in which the patient is placed by the necessity for absolute rest in a recumbent position. He believes that it is possible, in the majority of cases, to prevent thrombosis of the veins in the lower extremities by raising the lower end of the bed upon blocks of wood, thus assisting the flow of blood back to the heart. There are, of course, other things to be attended to. The patient's nutrition and the blood-pressure must be increased by appropriate tonic treatment, while constriction of the veins must be avoided.

The raised foot of the bed is also to be recommended in other conditions in which thrombosis may occur besides those following surgical operations, as in purely medical cases, such as anæmias, and in all conditions where there is an altered condition of the blood in which not infrequently thrombosis develops. He gives as instances typhoid fever, chronic enterocolitis, and peritonitis, that recover without operative interference.

Sealing of Operative Wounds About the Abdomen.—Bishop (*Medical Chronicle*, April, 1899), in dealing with the treatment of abdominal wounds by drainage, shows that these drains have frequently been the entrance through which bacteria have penetrated into the abdominal cavity and produced septic processes, and even death. He believes that the peritoneum is itself capable of destroying a certain number of bacteria, and that in cases that are not previously septic, where asepsis is employed with rigor, and we are certain of our technique, it is unnecessary to provide drainage. In addition to forming the avenue through which infection may enter the abdomen, glass drainage-tubes have been known to produce serious injury to the granulations that have formed about them, or to masses of granulation that have penetrated and filled their lumen from below. In addition to all these dangers, the drainage-tube has frequently been the etiological factor that has resulted in a ventral hernia by weakening the scar. Further autopsies have frequently shown that drainage-tubes do not drain, as collections of pus have been found close to the tube after the death of the patient. The revolution in our knowledge regarding the value of the fluids secreted in the wound, in contrast to their harmfulness, makes us all the more willing to do away with these tubes and exclude the bacteria. The first dressing of a wound is a bugbear, because infection of an aseptic wound has so frequently taken place at that time. This is avoided, the author believes, by employing an occlusive dressing in the beginning. He employs a celloidin dressing, which, in addition to being transparent, has a tendency to contract the skin and vessels immediately around the line of union, so limiting the tendency to overfulness of these vessels after any traumatism. The formula which he employs is the following:

Celloidin	1 part.
Abs. Aeth. Sulph.	āā 4 parts.

It is a clear fluid, and requires to be kept in a cool place and in a well-stoppered bottle. It is applied with a brush to the absolutely dry surface it is intended to cover. In order to obtain such dryness it is well to wash the part quickly with ether. It causes contraction, and the part may sink below the surrounding. About the ninth or tenth day the edges become loose, the central part still remaining firm. By the twelfth day it will be cracked. The sutures are all that hold it, and they should be cut close to the knots, which can be readily seen through the film. Generally a second application is unnecessary. This application is especially valuable in children, since it is difficult to make them leave the dressing alone, and there is danger of soiling.

A New Absorbable Ligature Material.—Sneguireff (*Cent. f. Chir.*, June 17, 1899) reports the clinical results of his experience with a new absorbable ligature and suture, which he finds to be absorbed a little more slowly than catgut, but to be capable of absolute sterilization. The ligature is made from the ligamentum nuchæ of the reindeer by dividing it in the direction of its fibres. The process of preparation is the following: Removal of fat in ether, soaking in juniper oil for fourteen days, removal of oil with ether and alcohol, soaking for two days in a ½ per cent. sublimate solution in 80 per cent. alcohol, finally two days in normal sterile salt solution; preservation in alcohol. Bacteriological examination and the clinical test of eighty-three major operations have proved the absolute sterility of this material, and that it is absorbed as soon as is desirable.

Formalin in the Surgical Treatment of Tuberculosis.—Hahn (*Cent. f. Chir.* June 17, 1899) reports some very interesting results which he has obtained by the substitution of formalin for iodoform in glycerin in the treatment of tubercular arthritis and tubercular abscess, and even in tubercular empyema of the pleura.

His series of clinical experiences has extended over a period of two years, and the results have been highly satisfactory. He employs one to five parts of a 35 per cent. solution of formalin in 100 parts of glycerin, injecting into a joint, after it has been aspirated and washed out with boric acid solution, one-third to one-half the amount of the formalin mixture that there was of pus before aspiration. The limb is put at rest. Then follows an elevation of temperature and marked reaction, with swelling and an amount of pain that sometimes demands morphine. The reaction subsides in a few days and the swelling decreases. At the end of two weeks it is well to repeat the injection where possible. Complete healing occurs after a short time, with restoration of function.

Where there are caseous granulation masses that are not broken down and cannot be aspirated at first, it will be found that the glycerin and formalin will break them down, and that at the subsequent aspiration they can be washed out.

The Excision of Hemorrhoids.—Reinbach (*Beiträg. zur klin Chir.*, 1899, Band xxiii., Heft 3) has studied the comparative results of excision and other methods as employed in Mikulicz's clinic. He finds the excision method to be almost ideal; the entire pathological area is removed; a rapid healing by primary union is secured with a linear scar. The patient is, in fact, returned to a normal condition. The v. Langenbeck operation has been followed by good results, except in four cases, where other intercurrent conditions have decreased its efficiency; in one case a relapse was certainly present. The excision method is to be most warmly recommended, and the author hopes that its employment may be generally adopted.

On the Sterilization of Catgut.—DARLING (*Journal Boston Society of Medical Sciences*, May, 1899) has made a series of interesting and successful experiments in testing different methods of sterilization and the effect on the tensile strength.

He finds that catgut can be effectually sterilized by dry heat, without decreasing its tensile strength or making it brittle, by wrapping the separate strands in several layers of paraffin paper. This simple procedure prevents the driving out of the moisture and fat in the catgut, so that it remains unshrivelled and flexible after a prolonged exposure to dry heat. This is the method of Boeckmann. By testing a series of strands of different sizes and qualities he found that a temperature of 140° to 160° C. would effectually sterilize the gut, and would not injure its strength or make it brittle, if employed continuously for one hour. A similar series of tests by the paraform and other methods showed them to be less efficient, and led the author to the following conclusions:

1. Catgut can be sterilized by dry heat with but slight loss of tensile strength.
2. Dry paraform gas is of doubtful value for the sterilization of catgut.
3. Methods of sterilization which involve soaking in antiseptic solutions tend to weaken the catgut to a greater or less degree.

The Surgical Treatment of Nephritis.—FERGUSON (*The Medical Standard*, June, 1899) has applied the surgical principles which would be applied in similar conditions existing in more superficial organs to inflammation of the kidney. It is wonderful that an inflamed kidney ever recovers, and it is probably only on account of its great vascularity, abundant nutrition, and the natural sources of drainage that it has through the uriniferous tubules that it does recover. If by surgical means only sufficient of the kidney can be saved from destruction to carry on even a small portion of the excretory function allotted to it, a great advance will have been made; for we know from the condition of the kidney as found after other diseases, as calculus, that it requires only a small portion of a kidney to sustain life. The surgical principles of treatment we would apply in another organ to prevent the tension, threatened necrosis, molecular destruction, and obstruction to secretion found in the kidney are aspiration, puncture, scarification, free incisions, thorough drainage, etc. Why not apply them to the kidney? Where operations have been performed upon such kidneys through errors of diagnosis the surgeon has been surprised to find the patient relieved of symptoms and, at least symptomatically, cured. Floating kidneys that have been stitched but not opened, or their capsules removed, have been found to continue to give rise to the same symptoms as before the operation, while those that have been incised, to explore them for stone or have had their capsules stripped back, have given no further symptoms.

The author reports two cases in which the patients had most marked cases of Bright's disease, with severe symptoms; they had been subjected to internal medication and rest treatment, but with no relief. He operated upon them, exposed the kidneys, punctured them, peeled the capsules off in part or in whole, and the patients were relieved of all their symptoms. Small sections were taken from the kidneys in both cases and subjected to careful microscopical examination, which demonstrated the correctness of the diagnosis.

The author believes it is too early to come to positive conclusions as to the ultimate results to be obtained by surgical exploration of cases of nephritis. But he feels certain that nephritis has a definite surgical relation. This branch of surgery is in its infancy, yet has the power to relieve suffering. Let us not sacrifice lives and organs on the infamous altar of pseudo-conservatism, nor be too cowardly to recommend and put into practice our honest convictions, founded on knowledge obtained by accidental experience or otherwise, but nevertheless purely scientific.

THERAPEUTICS.

UNDER THE CHARGE OF

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Toulylenediamine.—DR. EDWARD F. WILLOUGHBY presents the results of the administration of this drug, which, as has been asserted, increases both the solid and liquid constituents of the bile. A woman, aged forty-five years, the mother of several children, suffered from intense pain in the epigastrium, often leading to vomiting. Digestion became impaired, there was loss of flesh and strength, and attacks of pain became more frequent. Various methods of treatment gave no result. This remedy was made into one-grain pills, and treatment commenced with one pill each day. After a week no ill effects or appreciable benefit having been observed, the dose was increased to one pill morning and evening. From that time the most indisputable improvement set in; the attacks became fewer and trivial; once only was there vomiting, and only once was morphine needed. Three weeks later they ceased altogether, and the patient was able to eat and drink as any one in perfect health, to walk and go anywhere; the bowels became regular, the stools normal; sallowness and emaciation have disappeared. The effect of the remedy has apparenly been to stimulate the hepatic cells to a free secretion of normal bile and to restore the mucous membrane of the gall-bladder and duct to a healthy condition. It is assumed that the obstruction was caused by inspissated bile and mucus, or "bile-sand," rather than by calculi, and this was removed by the treament.—*The Therapist*, 1899, No. 3, p. 59.

The Treatment of Gallstones.—DR. W. L. CARR believes that treatment during an attack of pain is best begun with a hypodermatic injection of morphine, one-fourth of a grain, and atropine, one one-hundred and fiftieth of a grain, repeated as required. Chloroform inhalation in intense paroxysmal pain is invaluable. Hot applications should be made over the abdomen and to the extremities, to encourage the circulation. Hot baths, when feasible, give relief. Belladonna lessens the spasm of the cystic duct, and is best given in conjunction with the morphine. Large draughts of hot water, with sodium bicarbonate added, will, if retained, give considerable relief, and, if rejected, aid in cleaning out the stomach. Emetics and cathartics are contraindicated during a paroxysm. Treatment between attacks is mainly directed to the diet—fats, sauces, fried articles, and all rich food are forbidden. Sodium bicarbonate, added to a glassful of water and taken before meals, will form a very good substitute for expensive mineral waters. Sodium phosphate is the best laxative. Carlsbad salts and water sufficiently stimulate the gall-bladder and intestines to expel the stones. Six weeks of treatment is sufficient. It is a mistake to continue the use of salines and alkalies. Oil of turpentine is much more likely to stimulate the flow of the fluid bile than to break down old masses of cholesterin. Ether and chloroform, in two-drachm doses, relieve spasm and thus stop the pain. Ether stimulates the circulation, and a feeling of increased comfort results. Examination of dejections may show saponified bile, and less often calculi of cholesterin crystals. Sweet-oil will stimulate peristalsis; the dejections will show "calculi" composed of an oil globule coated with bile. Where there is a temporary complete stoppage of the biliary passages, the administration of bile pills, coated with salol, two hours before meals is of value, preventing putrefactive changes. Massage of the abdomen will empty the gall-bladder of small stones, but may cause the impaction of large calculi, which latter requires surgical treatment, as do constantly recurring attacks.—*The New York Medical Journal*, 1899, vol. lxix. p. 564.

Acokanthera Schimperi.—DRS. THOMAS R. FRASER and JOSEPH TILLIE have separated from the wood of this plant a tasteless, crystalline glucoside, which should be named acokantherin, instead of ouabaïne, the vernacular name for a Somali arrow-poison. This glucoside was found to be more toxic to warm-blooded than to cold-blooded animals, the difference being due to its action upon respiration of the former. Its general effects in rabbits are that after the subcutaneous administration of a small lethal dose death actually results in from sixty to eighty minutes. Motor power is gradually impaired, and is usually so much reduced that before death occurs the animal lies prostrate and powerless, and only a few feeble muscular movements indicate the arrest of the heart or respiration. When the dose is relatively large, or when the poison acts with unusual rapidity, the heart or respiration is arrested before general motor depression has set in, and sharp, convulsive movements occur at death. The respiration is rendered irregular, and is often slow, shallow, and abrupt; severe dyspnœic attacks occur from time to time, and not infrequently early in the experiment, so that death from asphyxia seems impending at a time when the cardiac infarcts are forcible and the animal is able to move about freely. This marked respiratory difficulty was not found to occur in several experiments when tracheotomy had been performed. At an early period the cardiac infarcts are usually felt to be more forcible and slower; just before death the rate is usually slow, but sometimes nearly as rapid as at the beginning of the experiments. Usually, respiratory efforts continue for a brief period after classed as symptoms of poisoning, but are frequently susceptible of other obvious interpretation. At all events they were slight and disappeared in a short time. In fourteen of these patients suffering from acute eczema, the results were satisfactory in a short time. Of the other eleven, four showed a marked benefit after application of picric acid used alone, or later alternating with other remedies. Evidently here picric acid had shortened the duration of the disease. In seven instances there was no benefit. Some of these were benefited by moist applications of salicylic acid, while others resisted all methods. In a few instances applications of picric acid seem to aggravate the local conditions, increasing the congestion, œdema, and the number of vesicles. This aggravation, however, rapidly disappeared under appropriate treatment. The following conclusions are offered: 1. This method should be tried in acute eczema and in the exacerbations of chronic eczema. 2. When well borne, and it generally is, after a brief period of smarting the symptoms are relieved. 3. This betterment generally goes on to cure; rarely the benefit is temporary. 4. If not well borne it does not cause severe local disturbance. 5. It appears to act as an antiseptic and keratoplastic agent.—*La Settimana Medica*, 1899, No. 9, p. 97.

Apomorphine.—DR. E. L. ABOGADO recommends this, when given hypodermatically, as an excellent emetic. For accumulations of mucus in the respiratory passages or in the chronic catarrhs it facilitates expectoration. It is useful to relieve the dry cough of tuberculosis. Dominguez recommends its use in cerebral congestion when it is desirable to empty the stomach quickly, and for patients suffering from digestive disturbances to tone up the organs.—*Cronica Medica Mexicana*, 1899, No. 9, p. 248.

The Treatment of Diabetic Coma.—DR. LUDWIG HERZOG believes that before the actual onset of coma, but in the presence of severe symptoms, sodium bicarbonate, in from one hundred and fifty to six hundred grains daily, is indicated. If urgent treatment is required in developed coma the subcutaneous infusion of physiological saline, or 3 to 5 per cent. of sodium bicarbonate, even a stronger combined solution, should be frequently repeated. The unpleasant symptoms observed from the use of sodium bicarbonate are diarrhœa, palpitation, and even bloody urine.—*Berliner klinische Wochenschrift*, 1899, No. 14, S. 295.

Notes on Cocaine.—DR. W. P. JENNEY writes that an aqueous solution of cocaine hydrochlorate applied to the skin is in part absorbed, coolness follows, and if a considerable surface has been thus treated physiologically, symptoms appear like those following chewing of cocoa-plant leaves. The quantity of cocaine so applied may be many times the maximum safe internal or hypodermatic dose, still no toxic action results. Local anæsthesia is somewhat modified. Sensation continues in the area treated for twenty minutes or more. Bruises thus painted over soon begin to fade, and discoloration and congestion rapidly disappear through the constriction of the bloodvessels. Pain more slowly subsides, seldom returning after the anæsthetic effect of the drug has ceased. Deep-seated pain requires a larger interval before relief is afforded. In such instances the skin is to be kept wet with the solution of cocaine until ten grains or more have been applied. Probably the effect is less due to action through the circulation rather than to local absorption. The strength of the solution used should be 2 to 4 per cent.; a fresh preparation is requisite. All absorption ceases if the surface dries. Bruises, sprains, and local inflammations can be thus much relieved. When neuralgic pain is superficial the application of cocaine solution is followed by immediate relief. A 6 per cent. solution is recommended for deep-seated pain in pleurisy, pneumonia, and peritonitis, a gradual palliation following. Marks due to the hypodermatic needle, when painted, rapidly disappear. Absorption of the toxic alkaloids will occur if the skin is broken, and in highly inflamed conditions. There are probably two alkaloids present in the drug as sold. One, rapidly absorbed by the skin, is non-poisonous and reduces local pain and inflammation; the other is not absorbed and remains on the skin surface. This latter is white, solid, intensely bitter, and causes numbness of mucous membranes. The variable action of different samples of the drug may be thus explained, depending on the proportions of toxic and non-toxic alkaloids present. The writer suggests lethane as a name for the toxic alkaloid.—*Medical Record*, 1899, vol. lv. p. 424.

Quinine Dermatopathy.—DR. CHOMATIANOS reports that an army officer every time that he takes quinine, within six hours erythematous areas, varying in size from a ten-cent piece to that of a dollar, appear on the hands, face, and penis. Later these areas become the seat of bulla, filled with limpid serum. The penis swells as if paraphymosis existed, and muco-pus is discharged as in balanoposthitis. After two or three days the bulla rupture and with the discoloration slowly disappear. These manifestations appear with the first dose of quinine, but once having been established the remedy does not give rise to any symptoms.—*La Grèce Médicale*, 1899, No. 4, p. 29.

Cure of Morphine, Chloral, and Cocaine Habits by Sodium Bromide.—DR. N. MACLEOD advises the following: The weight of the patient is to be ascertained, and, no organic disease contraindicating, sodium bromide is to be given in two doses of two drachms in solution every two hours for two days and one drachm during the third day. None is to be administered after bedtime on the third day. Three ounces in all will usually suffice, but more may be given to induce deep sleep, which should last five or six days and nights. During this period nothing but milk is given. Twice a day the bladder and rectum should be evacuated, oftener if necessary. For a week or more following return to consciousness, speech and locomotion, which are very much impaired or impossible on first awakening, gradually improve; the mental condition returns to normal more slowly. Delusions become less frequent and the memory improves. Sleep is often irregular but further treatment is undesirable. Solid food is indicated as soon as asked for. Exercise is desirable as soon as the power of locomotion is recovered sufficiently. Muscular tenderness soon passes off. Morphine may be given in the habitual dose on the first day, halved the second, and very little or none on the third day. Chloral, if there is a good sleep the first night, may be cut off at once. Cocaine may be reduced like morphine. Six weeks should be insisted on for convalescence. Cases cited show: 1. The withdrawal